

Software Product Description

PRODUCT NAME: FORTRAN IV/RT-11, Version 2

SPD 12.10.7

DESCRIPTION:

FORTRAN IV/RT-11 is an extended, optimizing FORTRAN IV system which operates on any RT-11 system. The entire system (including the compiler and optimization capabilities) is completely functional in the minimum 8K-word RT-11 system.

The FORTRAN IV system is designed to minimize the size of executable programs. Extensive optimizations such as common subexpression elimination, array vectoring, and "peephole" local code sequence tailoring decrease the size and increase the speed of object programs. The compiler produces the object code without using temporary files, and no intermediate assembly step is required.

FORTRAN programs may be developed under RT-11 and output in absolute binary format for execution on a stand-alone PDP-11 system with minimum peripherals. Only a device such as a paper tape reader is required for program loading.

Using SYSLIB, the RT-11 FORTRAN system subroutine library, all features and services of the RT-11 monitor are available to the FORTRAN programmer without the need for assembly language coding. FORTRAN programs can schedule subroutines to be executed when an external event occurs (the receipt of a message from another job, the completion of an I/O transfer, the lapsing of a specified time interval); perform all types of monitor-level input/output and system informational calls; and handle interrupts with a FORTRAN subprogram.

In addition to routines for calling the monitor functions, SYSLIB also contains extensive string manipulation routines. These routines create strings in LOGICAL*1 arrays, and allow their manipulation as string entities. These functions operate on variable-length strings. The strings can be manipulated fully without concern for their length, adding a new FORTRAN capability.

An optional subroutine package provides mathematical and statistical routines commonly required in scientific programming.

Additional Capabilities

- Optional in-line code generation for improved object code execution speed
- Memory-resident multiple virtual array support (Each array can have up to 32,767 elements.)

- Additional optimization algorithms have been included.
- FORTRAN IV/PLUS compatible language extensions (e.g., OPEN, CLOSE, LIST, directed I/O)

MINIMUM HARDWARE REQUIRED:

Any valid RT-11 configuration (16K words of memory are required for string support)

OPTIONAL HARDWARE:

Any RT-11 supported peripheral
Additional memory to a system total of 248K bytes
KE11-A, KE11-B Extended Arithmetic Element
KEV11 Extended Arithmetic Element
KE11-E Extended Instruction Set
KE11-F Floating Instruction Set
FP11 floating point processor

PREREQUISITE SOFTWARE:

RT-11 operating system, Version 3 or later

OPTIONAL SOFTWARE:

SSP-11, Scientific Subroutine Package
PLOT 11/RT-11
FORTRAN/RT-11 Extensions

TRAINING CREDITS:

None

SUPPORT CATEGORY:

B — Software Support will be provided as stated in the Software Support Categories Addendum to this SPD.

UPDATE POLICY:

Software Updates, if any, released by DIGITAL during the one (1) year period following installation, will be provided to the customer for a media charge (includes no installation). After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

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The following key (C, D, E, F, Q, R, T, Y, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QJ813-AD = binaries on 9-track magnetic tape.

C = DECTape
D = 9-track Magnetic Tape
E = RK05 Disk Cartridge
F = 7-track Magnetic Tape
Q = RL01 Disk Cartridge
R = Microfiche
T = RK06 Disk Cartridge
Y = RX01 Floppy Diskette
Z = No hardware dependency

Standard Options

- QJ813 -A— Single-use license, binaries, documentation, support services (media: C, D, E, F, Q, T, Y)
QJ813 -C— Single-use license, binaries, documentation, no support services (media: C, D, E, F, Q, T, Y)
QJ813 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

Source/Listing Options

- QJ813 -E— All sources (media: D, E, F, T)
QJ813 -F— Listings (media: R)

Upgrade Options

The following option is available as an upgrade kit from DOS/BATCH for use on the same single CPU on which DOS/BATCH is licensed. The license previously granted for DOS/BATCH shall be extended to cover this upgrade

- QJ260 -A— Single-use license, binaries, documentation, support services (media: C, E)

Update Options

Users of FORTRAN IV/RT-11, Version 1C, whose specified Support Category warranty has expired may order under license the following software update at the then current charge for such update. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

- QJ813 -H— Binaries, documentation (media: C, D, E, F, T, Y)
QJ813 -N— Sources update (media: D, E, F, T)

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- QJ813 -W— Binaries, documentation (media: C, D, E, F, T, Y)

Miscellaneous Options

- QJ813 -G— Pre-delivery kit (media: Z)

ADDITIONAL SERVICES:

None

**ADDENDUM
SOFTWARE SUPPORT CATEGORIES**

Each software product (hereinafter 'SOFTWARE') with a designated Support Category A or B in the applicable Software Product Description (SPD) existing at the time of order will be the current release at the time of delivery and will conform to the SPD. DIGITAL's sole obligation shall be to correct defects (nonconformance of the SOFTWARE to the SPD) as described below. Any SOFTWARE with a designated Support Category C will be furnished on an 'as is' basis.

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CATEGORY A

1. Upon notification by customer to the nearest DIGITAL office that the computer system, including all required prerequisite hardware and software, is ready for the installation of the SOFTWARE, DIGITAL will install such SOFTWARE in any location within the contiguous forty-eight (48) United States, the District of Columbia, or a country in which DIGITAL or a subsidiary of DIGITAL has a software service facility. The notification must be received by DIGITAL and the system must be ready for installation within thirty (30) days after the delivery of the SOFTWARE to customer or DIGITAL will have no obligation to install. Installation will consist of: (1) verification that all components of the SOFTWARE have been received by customer, (2) loading the SOFTWARE, and (3) executing a DIGITAL sample procedure.
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3. During the one (1) year period following installation, if the customer encounters a problem with the SOFTWARE which his diagnosis indicates is caused by a SOFTWARE defect, the customer may submit an SPR to DIGITAL. DIGITAL will respond to problems reported in SPRs which are caused by defects in the current unaltered release of the SOFTWARE via the Maintenance Periodical for the SOFTWARE, which reports SPRs received, code corrections, temporary corrections, generally useful emergency by-passes and/or notice of the availability of corrected code. Software Updates, if any, released by DIGITAL during the one (1) year period, will be provided to the customer on DIGITAL's standard distribution media as specified in the applicable SPD. The customer will be charged only for the media on which such updates are provided, unless otherwise stated in the applicable SPD, at DIGITAL's then current media prices.

CATEGORY B

During the one (1) year period following delivery, the services provided to the customer will be the same as set forth in 3 above.

CATEGORY C

SOFTWARE is provided on an 'as is' basis. Any software services, if available, will be provided at the then current charges.

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